

AMENDED CLAIMS WITHOUT MARKUPS

Claims 1-69, canceled.

70. (Currently Amended) A method for treating heart failure associated with loss of cardiac muscle contractility in a patient, comprising administering a phospholamban (PLB) gene encoding a protein having an S16E mutation therein, to improve SERCA2 mediated cardiac muscle contractility.

71. (Previously Presented) The method of claim 70, wherein the gene is administered in a viral gene expression vector.

72. (Previously Presented) The method of claim 70, wherein the viral gene expression vector further comprises a promoter suitable for use in cardiac muscle.

73. – 76. (Canceled)

77. (Previously Presented) The method of claim 70, wherein the viral gene expression vector is an adeno-associated viral vector (AAV).

78. (Previously Presented) The method of claim 70, further comprising co-administering a sarcoplasmic reticulum CA²⁺ ATPase (SERCA-2) gene with the PLB gene to the cardiac muscle.

79 through 85. (Canceled)

86. (Currently Amended) The method of claim 70, wherein the phospholamban gene further enhances SERCA-2 activity in the cardiac muscle.

87. (Previously Presented) The method of claim 70, wherein the phospholamban gene is administered with a permeabilizing agent.

In re Application of:

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88. (Previously Presented) The method of claim 87, wherein the permeabilizing agent is histamine, substance P or serotonin.

89. (Currently Amended) The method of claim 70, wherein the patient is a human.

90. (Currently Amended) The method of claim 70, wherein the patient is suffering from cardiac arrest or brachycardia with heart failure at the time that the gene is administered.

91. (Currently Amended) The method of claim 70, wherein the heart is isolated from systemic circulation at the time that the gene is administered.

92. (Canceled)

93. (Previously Presented) The method of claim 70, wherein practice of the method reduces the occurrence of cardiac interstitial fibrosis.

94 through 96. (Canceled)

97. (Currently Amended) The method of claim 70, wherein the viral expression vector is an adenoviral vector.